SCIENCE

FRIDAY, SEPTEMBER 28, 1888.

NATURE SAYS, THAT, so far as numbers are concerned, the Bath meeting of the British Association has been below the average. The number of tickets sold has been about fifty less than two thousand, forming a marked contrast to last year's meeting, which beat the record. The diminished attendance has told to some extent on the grants, several of which had to be reduced below the sums originally proposed and approved of. The meeting next year will be presided over by Professor Flower. Among the grants allotted by the general council, the following may be mentioned. For the question of electrical standards £100 have been granted, the Ben Nevis Observatory receives £50, and six smaller amounts have been granted for researches in various branches of physics and chemistry. For the 'Geological Record' £80 have been allotted, and provisions have been made for studying the volcanic phenomena of Japan, the distribution of erratic blocks, and several paleontological and stratigraphical questions. The greatest grants have been allotted to the biological section. The Marine Biological Association and the Naples Zoölogical Station continue to be supported by the association by grants of £200 and £100 respectively. An amount of £100 each has been given to a study of the zoölogy and botany of the West India Islands and of the Friendly Islands. The same sum will be devoted to explorations of the geology and geography of the Atlas Range, and to an investigation of estuaries by means of models. In the anthropological section two important grants have been made, — one for continuing the studies on the north-western tribes of Canada of £150 ; and another of £100 for exploring the Roman Bath at Bath, a great part of which was excavated last year, and found in a remarkably good state of preservation. Besides this, a number of minor grants have been allotted, the total amount to be expended being £1,645.

THE ORIGIN AND DEVELOPMENT OF LANGUAGE.

THE existence of a great number of independent linguistic stocks offers one of the most difficult problems to ethnology. Numerous attempts have been made to compare apparently separate stocks, and to trace their origin, but there remain a great number which cannot be derived from a common source. The most recent theory on the origin of linguistic stocks is the one offered by Prof. Horatio Hale. It was first set forth in his address as vice-president of the anthropological section at the Buffalo meeting of the American Association in 1886, and more fully expounded in a paper read recently before the Canadian Institute at Toronto.

The foundation of this theory is the frequently observed fact that children occasionally form a language of their own, apparently totally different from that of their parents. Hale has carefully compiled observations on this subject, and gives in both his papers very interesting and remarkable instances of such languages. He assumes that in a favorable climate a group of children may have become separated from grown-up persons, and thus developed a language of their own. He assumes that the process of forming dialects is entirely and fundamentally distinct from that of forming linguistic stocks. He concludes that children's languages of the type mentioned above are formed at one stroke, complete in all their grammatical elements. A few of the examples mentioned go far to show that this view is correct ; but so far we miss the proof that these languages are really fundamentally distinct from that of the parents, as no philologist has ever studied one of them thoroughly. Hale explains the similarity of groups of linguistic stocks in regard to their structure by assuming a potential faculty in the child to develop on a certain line. Such a faculty, in as complex a phenomenon as speech is, seems to us very improbable, and we are more inclined to see in such structural similarities a genetic connection.

Undoubtedly Hale has pointed out for the first time one of the most potent factors in the evolution of language, and the problem he propounds is so important that it ought to be taken up energetically.

As in every community child-language dies before being far advanced, it is self-evident that Hale's theory holds good only in such countries where a complete isolation of a few individuals, and complete interruption of their intercourse with the tribe from which they separated, are possible. Such can only have been the case where vast tracts of land were uninhabited ; and, as this is no longer the case, the non-occurrence of such phenomena in historic times cannot be considered proof against the theory. One phenomenon of great importance we will mention in this place, as it is greatly in favor of Hale's theory, but unfortunately we do not know whether the authority is a good one. The children of a tribe of hunters in South Africa are said to speak a language of their own, which they do not give up until they take part in the expeditions of their parents. If this really means that a language has developed, spoken by all the children of the tribe, it would be an important step on the line indicated by Hale.

If this theory is correct, the difference between the development of dialects and linguistic stocks cannot be as fundamental as Hale assumes. Wherever occasion is given for a complete isolation of a few children, occasion also arises for an isolation of a few adults and many children, forming one household. In this case the language of the children may gain a dominating influence over that of the adults. The result of such an event would be a language similar in structure to the original language, while the vocabularies would be distinct in important features. It seems probable that children's speech may have had a great influence in the origin of dialects of certain linguistic stocks in which numerous words occur that have undoubtedly originated independently in the respective dialects. The probability of such an event has been recognized by Hale, who points out that his theory explains the fact that certain words are common to a great number of stocks, although they may differ in all other respects. He thinks that such words were remembered by the children, and retained in their new language. The character of the new language will also depend entirely upon the stage of development of the language of the respective children. We all know that the common baby-talk has to a certain extent the same, although simplified, structure as the mother-tongue, while its vocabulary includes many independent words. Undoubtedly there exist numerous intermediate stages between such baby-talk and a child-language of absolutely independent character — if such exists. Therefore, if these languages really gave rise to new languages, we might expect to observe a gradual shading-off between dialects and stocks. It is very probable that by the process suggested by Hale numerous new elements may have developed in the language of isolated families.

We are not inclined to accept his theory as explaining the origin of stocks entirely distinct in structure until it has been proved that a child's language of such character exists. Our reason for this opinion is, that a child's language cannot originate until the child has learned from its parents, and from other people with whom it comes in contact, that speech is a means of communication ; that is, until it has apperceived the connection of certain sounds with certain other sensations. Therefore it seems probable that even an apparently independent child's language must be to a great extent influenced by the language it hears.

Therefore it appears of the greatest importance that the child's language should be studied in all its aspects. Some of the in-